

SEQUENCE LISTING

<110> Whitehouse, Martha Jo

<120> Methods and Compositions for the Treatment and Prevention of Erectile Dysfunction

<130> 1671.003 (35784/208786)

<150> 60/188, 480
<151> 2000-03-10

<150> 60/203,415
<151> 2000-05-11

<160> 9

<170> FastSEQ for Windows Version 4.0

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<210> 1
<211> 441
<212> DNA
<213> Bos taurus
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<220>
<221> CDS
<222> (1) . . . (441)

<400> 1

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cca gcc cta cca gaa gat ggg ggg tcc ggg gcc ttc cca cca ggg cac
Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly Ala Phe Pro Pro Gly His
   1           5           10          15

```

48

ttc aaa gat cca aaa cga cta tat tgt aaa aac ggg ggg ttc ttc cta
Phe Lys Asp Pro Lys Arg Leu Tyr Cys Lys Asn Gly Gly Phe Phe Leu
20 25 30

96

cga atc cac cca gat ggg cga gta gat ggg gta cga gaa aaa tcc gat
Arg Ile His Pro Asp Gly Arg Val Asp Gly Val Arg Glu Lys Ser Asp
35 40 45

144

```

cca cac atc aaa cta caa cta caa gcc gaa gaa cga ggg gta gta tcc
Pro His Ile Lys Leu Gln Leu Gln Ala Glu Glu Arg Gly Val Val Ser
      50          55          60

```

192

```

atc aaa ggg gta tgt gcc aac cga tat cta gcc atg aaa gaa gat ggg
Ile Lys Gly Val Cys Ala Asn Arg Tyr Leu Ala Met Lys Glu Asp Gly
   65          70          75          80

```

240

```

cga cta cta gcc tcc aaa tgt gta acc gat gaa tgt ttc ttc ttc gaa
Arg Leu Leu Ala Ser Lys Cys Val Thr Asp Glu Cys Phe Phe Phe Glu
          85          90          95

```

288

cga cta gaa tcc aac aac tat aac acc tat cga tcc cga aaa tat tcc
Arg Leu Glu Ser Asn Asn Tyr Asn Thr Tyr Arg Ser Arg Lys Tyr Ser

THE
GENE
COMPO
NENT
LIBRAR

100 105 110
tcc tgg tat gta gcc cta aaa cga acc ggg caa tat aaa cta ggg cca 384
Ser Trp Tyr Val Ala Leu Lys Arg Thr Gly Gln Tyr Lys Leu Gly Pro
115 120 125

aaa acc ggg cca ggg caa aaa gcc atc cta ttc cta cca atg tcc gcc 432
Lys Thr Gly Pro Gly Gln Lys Ala Ile Leu Phe Leu Pro Met Ser Ala
130 135 140

aaa tcc taa 441
Lys Ser *
145

<210> 2
<211> 146
<212> PRT
<213> Bos taurus

<400> 2
Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly Ala Phe Pro Pro Gly His
1 5 10 15
Phe Lys Asp Pro Lys Arg Leu Tyr Cys Lys Asn Gly Gly Phe Phe Leu
20 25 30
Arg Ile His Pro Asp Gly Arg Val Asp Gly Val Arg Glu Lys Ser Asp
35 40 45
Pro His Ile Lys Leu Gln Leu Gln Ala Glu Glu Arg Gly Val Val Ser
50 55 60
Ile Lys Gly Val Cys Ala Asn Arg Tyr Leu Ala Met Lys Glu Asp Gly
65 70 75 80
Arg Leu Leu Ala Ser Lys Cys Val Thr Asp Glu Cys Phe Phe Glu
85 90 95
Arg Leu Glu Ser Asn Asn Tyr Asn Thr Tyr Arg Ser Arg Lys Tyr Ser
100 105 110
Ser Trp Tyr Val Ala Leu Lys Arg Thr Gly Gln Tyr Lys Leu Gly Pro
115 120 125
Lys Thr Gly Pro Gly Gln Lys Ala Ile Leu Phe Leu Pro Met Ser Ala
130 135 140
Lys Ser
145

<210> 3
<211> 441
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1)...(441)

<400> 3 48
ccc gcc ttg ccc gag gat ggc ggc agc ggc ggc gcc ttc ccg ccc ggc cac
Pro Ala Leu Pro Glu Asp Gly Gly Ser Gly Ala Phe Pro Pro Gly His
1 5 10 15

ttc aag gac ccc aag cgg ctg tac tgc aaa aac ggg ggc ttc ttc ctg 96

Phe	Lys	Asp	Pro	Lys	Arg	Leu	Tyr	Cys	Lys	Asn	Gly	Gly	Phe	Phe	Leu	
20															30	
cgc atc cac ccc gac ggc cga gtt gac ggg gtc cgg gag aag agc gac															144	
Arg	Ile	His	Pro	Asp	Gly	Arg	Val	Asp	Gly	Val	Arg	Glu	Lys	Ser	Asp	
35															45	
cct cac atc aag cta caa ctt caa gca gaa gag aga gga gtt gtg tct															192	
Pro	His	Ile	Lys	Leu	Gln	Leu	Gln	Ala	Glu	Glu	Arg	Gly	Val	Val	Ser	
50															60	
atc aaa gga gtg tgt gct aac cgt tac ctg gct atg aag gaa gat gga															240	
Ile	Lys	Gly	Val	Cys	Ala	Asn	Arg	Tyr	Leu	Ala	Met	Lys	Glu	Asp	Gly	
65															80	
aga tta ctg gct tct aaa tgt gtt acg gat gag tgt ttc ttt ttt gaa															288	
Arg	Leu	Leu	Ala	Ser	Lys	Cys	Val	Thr	Asp	Glu	Cys	Phe	Phe	Glu		
85															95	
cga ttg gaa tct aat aac tac aat act tac cgg tca agg aaa tac acc															336	
Arg	Leu	Glu	Ser	Asn	Asn	Tyr	Asn	Thr	Tyr	Arg	Ser	Arg	Lys	Tyr	Thr	
100															110	
agt tgg tat gtg gca ctg aaa cga act ggg cag tat aaa ctt gga tcc															384	
Ser	Trp	Tyr	Val	Ala	Leu	Lys	Arg	Thr	Gly	Gln	Tyr	Lys	Leu	Gly	Ser	
115															125	
aaa aca gga cct ggg cag aaa gct ata ctt ttt ctt cca atg tct gct															432	
Lys	Thr	Gly	Pro	Gly	Gln	Lys	Ala	Ile	Leu	Phe	Leu	Pro	Met	Ser	Ala	
130															140	
aag	agc	tga													441	
Lys	Ser	*														
145																
<210> 4																
<211> 146																
<212> PRT																
<213> Homo sapiens																
<400> 4																
Pro	Ala	Leu	Pro	Glu	Asp	Gly	Gly	Ser	Gly	Ala	Phe	Pro	Pro	Gly	His	
1															15	
Phe															10	
Lys	Asp	Pro	Lys	Arg	Leu	Tyr	Cys	Lys	Asn	Gly	Gly	Phe	Phe	Leu		
20															30	
Arg	Ile	His	Pro	Asp	Gly	Arg	Val	Asp	Gly	Val	Arg	Glu	Lys	Ser	Asp	
35															45	
Pro																
His	Ile	Lys	Leu	Gln	Leu	Gln	Ala	Glu	Glu	Arg	Gly	Val	Val	Ser		
50															60	
Ile	Lys	Gly	Val	Cys	Ala	Asn	Arg	Tyr	Leu	Ala	Met	Lys	Glu	Asp	Gly	
65															80	
Arg	Leu	Leu	Ala	Ser	Lys	Cys	Val	Thr	Asp	Glu	Cys	Phe	Phe	Glu		
85															95	
Arg	Leu	Glu	Ser	Asn	Asn	Tyr	Asn	Thr	Tyr	Arg	Ser	Arg	Lys	Tyr	Thr	
100															110	
Ser																
Trp	Tyr	Val	Ala	Leu	Lys	Arg	Thr	Gly	Gln	Tyr	Lys	Leu	Gly	Ser		

115	120	125
Lys Thr Gly Pro Gly Gln	Lys Ala Ile Leu Phe	Leu Pro Met Ser Ala
130	135	140
Lys Ser		
145		

<210> 5
<211> 468
<212> DNA
<213> *Bos taurus*

<220>
<221> CDS
<222> (1) ... (468)

<400> 5
atg gca gcc ggg agc atc acc acg ctg cca gcc cta cca gaa gat ggg
Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly
1 5 10 15

ggg tcc ggg gcc ttc cca cca ggg cac ttc aaa gat cca aaa cga cta 96
 Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu
 20 25 30

tat tgt aaa aac ggg ggg ttc ttc cta cga atc cac cca gat ggg cga 144
 Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg
 35 40 45

```

gta gat ggg gta cga gaa aaa tcc gat cca cac atc aaa cta caa cta      192
Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu
      50          55          60

```

```

caa gcc gaa gaa cga ggg gta gta tcc atc aaa ggg gta tgt gcc aac 240
Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn
 65           70           75           80

```

```
cga tat cta gcc atg aaa gaa gat ggg cga cta cta gcc tcc aaa tgt      288
Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys
85          90          95
```

```

gta acc gat gaa tgt ttc ttc ttc gaa cga cta gaa tcc aac aac tat 336
Val Thr Asp Glu Cys Phe Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr
          100          105          110

```

```

aac acc tat cga tcc cga aaa tat tcc tcc tgg tat gta gcc cta aaa      384
Asn Thr Tyr Arg Ser Arg Lys Tyr Ser Ser Trp Tyr Val Ala Leu Lys
115           120           125

```

```

cga acc ggg caa tat aaa cta ggg cca aaa acc ggg cca ggg caa aaa 432
'Arg Thr Gly Gln Tyr Lys Leu Gly Pro Lys Thr Gly Pro Gly Gln Lys
130          135          140

```

```

gcc atc cta ttc cta cca atg tcc gcc aaa tcc taa          468
Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser *
145           150           155

```

<210> 6
<211> 155
<212> PRT
<213> Bos taurus

<400> 6
Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly
1 5 10 15
Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu
20 25 30
Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg
35 40 45
Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu
50 55 60
Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn
65 70 75 80
Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys
85 90 95
Val Thr Asp Glu Cys Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr
100 105 110
Asn Thr Tyr Arg Ser Arg Lys Tyr Ser Ser Trp Tyr Val Ala Leu Lys
115 120 125
Arg Thr Gly Gln Tyr Lys Leu Gly Pro Lys Thr Gly Pro Gly Gln Lys
130 135 140
Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser
145 150 155

<210> 7
<211> 474
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (1) ... (468)

<400> 7
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Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly
1 5 10 15
ggc agc ggc gcc ttc ccg ccc ggc cac ttc aag gac ccc aag cgg ctg 96
Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu
20 25 30
tac tgc aaa aac ggg ggc ttc ttc ctg cgc atc cac ccc gac ggc cga 144
Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg
35 40 45
gtt gac ggg gtc cgg gag aag agc gac cct cac atc aag cta caa ctt 192
Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu
50 55 60
caa gca gaa gag aga gga gtt gtg tct atc aaa gga gtg tgt gct aac 240
Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn
65 70 75 80

cgt tac ctg gct atg aag gaa gat gga aga tta ctg gct tct aaa tgt	288
Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys	
85 90 95	
gtt acg gat gag tgt ttc ttt ttt gaa cga ttg gaa tct aat aac tac	336
Val Thr Asp Glu Cys Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr	
100 105 110	
aat act tac cgg tca agg aaa tac acc agt tgg tat gtg gca ctg aaa	384
Asn Thr Tyr Arg Ser Arg Lys Tyr Thr Ser Trp Tyr Val Ala Leu Lys	
115 120 125	
cga act ggg cag tat aaa ctt gga tcc aaa aca gga cct ggg cag aaa	432
Arg Thr Gly Gln Tyr Lys Leu Gly Ser Lys Thr Gly Pro Gly Gln Lys	
130 135 140	
gct ata ctt ttt ctt cca atg tct gct aag agc tga ttttaa	474
Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser *	
145 150 155	

<210> 8
<211> 155
<212> PRT
<213> Homo sapiens

<400> 8	
Met Ala Ala Gly Ser Ile Thr Thr Leu Pro Ala Leu Pro Glu Asp Gly	
1 5 10 15	
Gly Ser Gly Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu	
20 25 30	
Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg	
35 40 45	
Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu	
50 55 60	
Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn	
65 70 75 80	
Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys	
85 90 95	
Val Thr Asp Glu Cys Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr	
100 105 110	
Asn Thr Tyr Arg Ser Arg Lys Tyr Thr Ser Trp Tyr Val Ala Leu Lys	
115 120 125	
Arg Thr Gly Gln Tyr Lys Leu Gly Ser Lys Thr Gly Pro Gly Gln Lys	
130 135 140	
Ala Ile Leu Phe Leu Pro Met Ser Ala Lys Ser	
145 150 155	

<210> 9
<211> 9
<212> PRT
<213> Bos taurus

<400> 9	
Met Ala Ala Gly Ser Ile Thr Thr Leu	
1 5	